

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT FRIGG

Appeal No. 1999-0713
Application 08/325,629

HEARD: March 8, 2001

Before ABRAMS, MCQUADE, and GONZALES, Administrative Patent Judges.

MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Robert Frigg originally took this appeal from the final rejection of claims 8 through 17. The appellant has since canceled claim 8, amended claims 9, 15 and 17, and added claim 18. The appeal now involves claims 9 through 17. New claim 18, the only other claim pending in the application, stands objected to, presumably because it depends from a rejected base claim.

THE INVENTION

The invention relates to "a spinal column fixation device" (specification, page 1). Representative claim 15 reads as follows:

15. A spinal column fixation assembly comprising a longitudinal support piece having a longitudinal axis, a fixation device having an anchoring element for fixation to a bone and a head section formed as a single piece with said anchoring element, said head section having a channel for receiving said support piece and a slot extending through said fixation device along an axis transverse to the axis of a support piece positioned in said channel, said assembly further comprising a tension stable fastening element extending through said slot and around said support piece to secure said support piece in said channel.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

Partridge	4,119,091	Oct. 10,
1978		
Puno et al.	4,805,602	Feb. 21,
1989		
(Puno)		
Eitenmuller et al.	5,108,399	Apr. 28,
1992		
(Eitenmuller)		

THE REJECTIONS

Claims 10 through 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Puno in view of Partridge.

Claim 9 stands rejected under 35 U.S.C. § 103 as being unpatentable over Puno in view of Partridge and Eitenmuller.

Attention is directed to the appellant's main and reply briefs (Paper Nos. 22 and 25) and to the examiner's main and supplemental answers (Paper Nos. 23 and 30) for the respective positions of the appellant and the examiner with regard to the merits of these rejections.¹

DISCUSSION

I. Grouping of claims

Pursuant to 37 CFR § 1.192(c)(7), the appellant states (see page 3 in the reply brief) that the claims as currently rejected should be grouped as follows: Group I - claims 11, 14,² 15, 16 and 17; Group II - claims 10, 12 and 13; and Group III - claim 9. In accordance with this grouping and the

¹ The above rejections of claims 9 through 17 were entered as new grounds of rejection in the main answer, superseding the various rejections set forth in the final rejection.

² Claim 14 depends from canceled claim 8, an informality which is deserving of correction in the event of further prosecution before the examiner.

corresponding arguments in the briefs, claims 11, 14, 16 and 17 shall stand or fall with claim 15, claims 10 and 13 shall stand or fall with claim 12 and claim 9 shall stand or fall alone.

II. Group I - claims 11 and 14 through 17

Puno, the examiner's primary reference, discloses "an apparatus for posterior internal fixation of the spine" (column 1, lines 6 and 7). In general, the apparatus includes a stainless steel rod 18 adapted to span the vertebrae to be immobilized and a series of stainless steel anchors 16 designed to secure the vertebrae to the rod (see Figure 1). Of particular interest is the embodiment shown in Figures 7 and 8 wherein each of the anchors comprises a transpedicular screw 21 and a rod support 116. As described by Puno,

rod support 116 includes a U-shaped head 117 which defines a rod-receiving channel 118 having a depth which exceeds the diameter of the rod 18. The rod 18 engages the channel 118 and is secured within the channel 118 by wires 120 which extend through bores 122 transverse to the longitudinal axis of the rod 18. The head 116 includes on its underside, two fillets 124 which act to grip the bone. In the second embodiment, the rod support 116 is countersunk 123 to accommodate the screw head 30.

. . . [T]he screw may be an integral portion of the anchor. It is preferable however, that the screw is a separate member having . . . freedom of movement [column 6, lines 7 through 20].

Puno responds to all of the limitations in representative claim 15 except arguably the one calling for a tension stable fastening element extending through a slot and around the support piece to secure the support piece in the channel. In the Puno apparatus, wires 120 extend through bores 122 and around the support piece (rod 18) to secure the support piece in channel 118.

The appellant's contention that Puno is additionally deficient because it teaches away from the limitation requiring the head section to be formed as a single piece with the anchoring element is not persuasive. All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art, even those phrased in terms of a non-preferred embodiment. In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Puno's disclosure of an integral anchor, i.e., an integral anchoring element (screw 21) and head section (rod support 116), although not preferred, nonetheless would have suggested an anchoring

element and head section formed as a single piece as recited in claim 15.

To the extent that Puno's wires 120 do not constitute a tension stable fastening element as recited in claim 15, Partridge discloses a plastic tie adapted to wrap around and secure the parts of a fractured bone. In Partridge's words, the tie

comprises an elongate flexible strap 1 having ratchet teeth 2 on one face thereof. A widened portion 3 is provided at one end of the strap, the portion 3 containing a slot 4 of sufficient width to receive the strap 1 when the end of the strap is bent round and passed through the slot. Extending into the slot 4 is a tongue 5 which acts as a pawl engaging the ratchet teeth when the strap is passed through the slot to prevent withdrawal of the strap therefrom [column 1, lines 54 through 62].

It is not disputed that the Partridge tie is a tension stable fastening element of the sort recited in the appealed claims.

According to the examiner, it would have been obvious "in view of Partridge, to use a fastening element that is movable only in one direction to replace the fastener 120 of Puno et al in order to be able to more easily and securely tighten the fixation device into place" (main answer, page 5; supplemental answer, pages 5 and 6).

The examiner's conclusion here is well founded. Partridge's description (see column 2, lines 18 through 20) of the self-evident ease with which the tie can be applied would have provided the artisan with ample suggestion to use such ties in place of Puno's wires 120, in conjunction with suitably sized and disposed slots in Puno's rod support 116, to facilitate the securement of the rod support to rod 18. Thus, the fair teachings of Puno and Partridge belie the various lack of motivation arguments advanced by the appellant.

The related contention that the age of the Puno and Partridge references demonstrates non-obviousness (see page 8 in the reply brief) is also unconvincing. The mere age of references is not indicative of the unobviousness of their combination, absent evidence that, notwithstanding knowledge of the references, the art tried and failed to solve the problem. In re Wright, 569 F.2d 1124, 1127, 193 USPQ 332, 335 (CCPA 1977). The record in this application contains no such evidence.

In light of the above, the differences between the subject matter recited in claim 15 and the prior art are such

that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. Therefore, we shall sustain the standing 35 U.S.C. § 103 rejection of claim 15, and of claims 11, 14, 16 and 17 which stand or fall therewith, as being unpatentable over Puno in view of Partridge.

III. Group II - claims 10, 12 and 13

Independent claim 12 recites a spinal column fixation device comprising a single piece anchoring element and head section, a plurality of transverse slots in the head section, and a tension stable fastening element adapted to be positioned in one of the slots for attaching the fixation device to a longitudinal support piece. The fastening element is further defined as comprising a belt formed in a loop and a closure element on the belt movable along the belt in one direction only to reduce the size of the loop.

For the reasons discussed above, and notwithstanding the appellant's hindsight arguments to the contrary, the combined teachings of Puno and Partridge would have suggested the subject matter recited in claim 12. Therefore, we shall sustain the standing 35 U.S.C. § 103 rejection of claim 12,

and of claims 10 and 13 which stand or fall therewith, as being unpatentable over Puno in view of Partridge.

IV. Group III - claim 9

Claim 9 depends from claim 15 and recites that the anchoring element, head section and longitudinal support piece are titanium and the fastening element is resorbable plastic. In rejecting this claim (see pages 5 and 6 in the main answer and pages 5 through 7 in the supplemental answer), the examiner concludes that these features would have been obvious in view of (1) the well known orthopaedic utilization of titanium and (2) the teachings of Eitenmuller with respect to resorbable plastics. The appellant challenges the rejection only to the extent the examiner relies on Eitenmuller (see pages 10 and 11 in the reply brief).

Eitenmuller evidences the conventional practice of making surgical implants from bio-resorbable polymers. The advantage of this practice is that such polymers eventually will break down into substances naturally occurring in the body and be expelled with the metabolic circulation, thereby eliminating

the need for a second operation to remove the implant (see Eitenmuller at column 1, lines 5 through 44).

Given these well known aspects of bio-resorbable implant polymers, the examiner's conclusion that it would have been obvious to further modify the spinal fixation apparatus disclosed by Puno by making the plastic tie suggested by Partridge of a resorbable plastic is sound.

Accordingly, we shall sustain the standing 35 U.S.C. § 103 rejection of claim 9 as being unpatentable over Puno in view of Partridge and Eitenmuller.

V. Additional matter for the examiner's consideration

Claim 18 depends from claim 15 and recites that the anchoring element has a major axis intersected by the slot through which the tension stable fastening element extends. As discussed above, the combined teachings of Puno and Partridge would have suggested using plastic ties of the type disclosed by Partridge in place of Puno's wires 120, in conjunction with suitably sized and disposed slots in Puno's rod support 116, to facilitate the securement of the rod support to rod 18. It is not apparent why these same teachings would not have suggested,

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as a simple matter of common sense, the use of a single, centered tie and slot in the Puno device, thereby arriving at the subject matter recited in claim 18. The appellant's position that the invention defined in claim 18 is additionally patentable as compared with the subject matter recited in parent claim 15 (see pages 11 and 12 in the reply brief) rests on the premise that Puno's screw and rod support are separate elements. As pointed out above, however, this premise is refuted by Puno's disclosure that the screw and rod support can be made integral. Upon return of the application to the technology center, the examiner should reconsider the patentability of claim 18 over the prior art and either enter an appropriate rejection or explain why the claimed subject matter is patentable.

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SUMMARY

The decision of the examiner to reject claims 9 through
17 is affirmed.

AFFIRMED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
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)	APPEALS AND
JOHN P. MCQUADE)	
Administrative Patent Judge)	INTERFERENCES
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JOHN F. GONZALES)	
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